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ज़ीराम वॉटर डिस्पर्सिबल पाउडर —  
विशिष्टि

( दूसरा पुनरीक्षण )

Ziram Water Dispersible Powder —  
Specification

( Second Revision )

ICS 65.100.30

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Price Group 4

## FOREWORD

This Indian Standard (Second Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Pesticides Sectional Committee had been approved by the Food and Agriculture Divisional Council.

Ziram water dispersible powders are used for the control of many diseases of agricultural crops specially in the control of blast of paddy, tikka diseases of groundnut and damping-off of tobacco and also to cure zinc deficiency in citrus crops.

This standard was first issued in 1966. In the first revision issued in 1975, an alternative method for the determination of ziram content based on the estimation of dimethylamine was incorporated.

The composition of the committee responsible for the formulation of this standard listed in Annex B.

In this revision, the standard has been brought out in the latest style and format of the Indian Standards, and references to Indian Standards wherever applicable have been updated. It also incorporates two amendments issued to this standard.

In the preparation of this standard, due consideration has been given to the provisions of the *Insecticides Act*, 1968, and the rules framed thereunder. However, this standard is subject to the restrictions imposed under these, wherever applicable.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 2022 'Rules for rounding off numerical values (*second revision*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Indian Standard*  
**ZIRAM WATER DISPERSIBLE POWDER — SPECIFICATION**  
*( Second Revision )*

## 1 SCOPE

This standard prescribes the requirements and the methods of sampling and test for ziram water dispersible powder concentrates containing varying percentages of ziram, technical.

## 2 REFERENCES

The standards listed in Annex A contain provisions which, through reference in this text, constitute provision of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards listed in Annex A.

## 3 REQUIREMENTS

### 3.1 Descriptions

The material shall be in the form of a homogeneous powder, white to off-white in colour and shall wet readily on mixing with water, providing a suspension suitable for use as a spray.

**3.1.1** Ziram, technical, employed in the manufacture of this material shall conform to IS 3900.

**3.2** The material shall comply with the requirements given in Table 1.

### 3.2.1 Ziram Content

When determined by the method prescribed in Annex A of IS 3900 the observed ziram content, percent by mass of any of the samples shall not differ from the declared nominal value by more than the percent tolerance limits indicated below:

<i>Nominal Value, percent</i>	<i>Tolerance, percent</i>	
Up to 9	+10 -5	} of the nominal value
Above 9 and below 50	±5	
50 and above	+5 -3	

**3.2.1.1** The actual value of the ziram content in the formulation shall be calculated to the second decimal place for rounding off the first decimal place before applying the tolerance as stipulated in **3.2.1**.

## 4 PACKING

The material shall be packed according to the requirements given in IS 8190 (Part 1).

**Table 1 Requirements for Ziram Water Dispersible Powder Concentrates**  
*(Clause 3.2)*

<b>Sl No.</b>	<b>Characteristic</b>	<b>Requirements</b>	<b>Method of Test, Ref to</b>
(1)	(2)	(3)	(4)
i)	Ziram content, percent by mas	Nominal value as declared on the container ( <i>see 3.2.1</i> )	Annex A of IS 3900
ii)	Sieving requirement, material passing through 45-micron IS Sieve [ <i>see IS 460 (Part 1)</i> ], percent by mass, <i>Min</i>	98	IS 6940
iii)	Suspensibility percent by mass, <i>Min</i>	50	IS 6940
iv)	Wettability in seconds, <i>Max</i>	120	IS 6940

## 5 MARKING

**5.1** The container shall bear legibly and indelibly the following information:

- a) Name of the material;
- b) Name and address of the manufacturer;
- c) Batch number;
- d) Date of manufacture;
- e) Date of expiry;
- f) Net quantity;
- g) Nominal ziram content, percent (*m/m*); and
- h) Cautionary notice as worded in the *Insecticides Act*, 1968, and rules framed thereunder; and
- j) Any other information required under the *Legal Metrology (Packaged Commodities) Rules*, 2011.

### 5.2 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act*, 2016 and the Rules and Regulations framed thereunder, and the products may be marked with the Standard Mark.

## 6 SAMPLING

When freshly manufactured material in bulk quantity and for the retail pack of the formulated

product is/are offered for inspection, representative sample of the material shall be drawn and tested as prescribed in IS 10627 and if tested within 90 days of its date of manufacture, the criteria for conformity shall be the contents in percent (*m/m*), shall not be less than the declared nominal value. The upper limit for conformity shall be the same as those given in **3.2.1** of this standard. When the material is offered for inspection after 90 days of its manufacture, sampling shall be done as prescribed in IS 10627. However, the criteria for conformity of the material, when tested, shall be the limits of tolerances, as applicable over the declared nominal value and given under **3.2.1** of this standard.

## 7 TESTS

**7.1** Tests shall be carried out by the appropriate methods referred to in col (4) of Table 1.

**7.2** For estimating ziram content, begin the test with sufficient quantity of sample containing 0.3 g of ziram content.

### 7.3 Quality of Reagents

Unless specified otherwise, pure chemicals and distilled water (*see* IS 1070) shall be employed in the tests.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the results of analysis.

**ANNEX A**  
(Clause 2)

**LIST OF REFERRED STANDARDS**

<i>IS No.</i>	<i>Title</i>	<i>IS No.</i>	<i>Title</i>
IS 460 (Part 1) : 2020	Test sieves — Specification: Part 1 Wire cloth test sieves ( <i>fourth revision</i> )	IS 10627 : 1983	Methods for sampling of pesticide formulation
IS 1070 : 1992	Reagent grade water — Specification ( <i>third revision</i> )	IS 3900 : 1975	Ziram, technical — Specification ( <i>first revision</i> )
IS 6940 : 1982	Methods of test for pesticides and their formulations ( <i>first revision</i> )		

**ANNEX B**  
(Foreword)

**COMMITTEE COMPOSITION**  
Pesticides Sectional Committee, FAD 01

<i>Organization</i>	<i>Representative(s)</i>
Directorate of Plant Protection Quarantine and Storage, Faridabad	DR RAVI PRAKASH ( <b><i>Chairperson</i></b> )
All India Biotech Association, New Delhi	SHRI SAURABH SINGHAL SHRI SHAH JI DHAR ( <i>Alternate</i> )
Central Insecticide Board and Registration Committee, Faridabad	SECRETARY DR VANDANA SETH ( <i>Alternate</i> )
Central Insecticide Laboratory, Faridabad	DR ARCHANA SINHA SHRI SUBHASH CHAUDHARY ( <i>Alternate</i> )
Consumer Guidance Society of India, Mumbai	SHRI SITARAM DIXIT DR M. S. KAMATH ( <i>Alternate</i> )
Crop Care Federation of India, New Delhi	DR J. C. MAJUMDAR
Crop Life India, New Delhi	SHRI ASITAVA SEN MS NIRUPAMA SHARMA ( <i>Alternate</i> )
CSIR -Indian Institute of Toxicology Research, Lucknow	DR SHEELENDRA P. SINGH
FMC India Pvt Ltd, Bengaluru	SHRI CHIRAG PATEL
Food Safety and Standards Authority of India, New Delhi	ADVISOR (STANDARDS)
IDMA Laboratories Ltd, Chandigarh	DR INDRA RAI
Indian Agricultural Research Institute, New Delhi	DIRECTOR
Indian Institute of Packaging, Mumbai	DR TANWEER ALAM
Indian Pest Control Association, New Delhi	SHRI UDAYAN GHOSH
Institute of Pesticide Formulation Technology, Gurgaon	DR M. VAIRAMANI
Ministry of Agriculture, Department of Agriculture, Chennai	JOINT DIRECTOR OF AGRICULTURE (RES) DEPUTY DIRECTOR LAB ( <i>Alternate</i> )
National Centre for Integrated Pest Management, New Delhi	DR SUMITRA ARORA
National Institute of Plant Health Management, Hyderabad	DR MAHESH SAINI MS T. SRIDEVI ( <i>Alternate</i> )
Pesticide Manufactures and Formulators Association of India (PMFAI), Mumbai	DR ARCHANA SRIVASTAVA DR UDAY KUMAR ( <i>Alternate</i> )

<i>Organization</i>	<i>Representative(s)</i>
Regional Pesticides Testing Laboratory, Chandigarh	SHRI V. VASU
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*Member Secretary*  
SHRI KULDEEP MITTAL  
SCIENTIST 'B'/ASSISTANT DIRECTOR  
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### Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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